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ABSTRACT

Over the last decade, policymakers, practitioners, and funders in the youth development field have become increasingly reliant on social indicators as tools to identify areas of need, to target resources, to set and monitor progress toward measurable goals, and to assess policy and program effectiveness. This report to the William T. Grant Foundation provides an overview of the youth social indicators field, including its dimensions, accomplishments, and major opportunities for development in the coming decade, with particular attention to those opportunities that seem to fit most closely with the goals of the Foundation. Following introductory remarks on the nature and uses of social indicators, the report describes the current status of and key opportunities for the youth indicators field in four major areas: (1) research and measurement; (2) data development; (3) dissemination/data availability; and (4) using indicators in training and technical assistance. The report concludes by identifying the greatest opportunities for the Grant Foundation, given the Foundation's core interests. Appended are web site addresses for the surveys, publications, and programs mentioned in the report. (Contains 41 references.) (KB)

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The Youth Indicators Field in Research and Practice: Current Status and Targets of Opportunity

(A Report to the William T. Grant Foundation)

Brett Brown, Ph.D. and Kristin Moore, Ph.D.

Child TRENDS

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Introduction

Over the last decade, policymakers, practitioners, and funders in the youth development field have become increasingly reliant on social indicators as tools to identify areas of need, to target resources, to set and monitor progress towards measurable goals, and to assess policy and program effectiveness. These efforts have encouraged and been supported by significant advances in:

- research and measurement,
- data development,
- dissemination capacity, and
- practical techniques needed to use social indicator data effectively.

The number of surveys to monitor youth well-being at the international, national, state and local levels has exploded, as have the reports that communicate their findings (Brown 2001, Brown, Smith, and Harper 2001; Bradshaw and Barnes 1999). Researchers have made great strides in refining measures of youth risk, and are breaking new ground in understanding the elements of positive youth development and the social factors (familial, peer, and community) that influence both positive and negative development (National Research Council and Institute of Medicine 2002; Stagner and Zweig 2001; Roth et al., 2001; Eccles et al. 2001; Harris and Cavanaugh 2001; Zaff. Moore, Papillo-Romero, and Williams, forthcoming).

The substantial advances in each of these four broad dimensions of youth social indicators work have helped the field as a whole to advance. They have also created a growing set of opportunities and needs in the areas of research, data collection, dissemination, and practice. Due to the interlocking nature of these dimensions, advances must continue in all areas if the field is to continue to develop. Advances in the practical application of youth indicators have generated the need for better research and more data; advances in research have generated new insights to inform more effective programs and policies; advances in dissemination activities have improved the knowledge base of

practitioners, and can inform public opinion in ways that create the popular will to support more sustained and effective policies toward youth.

The goal of this paper is to provide the staff of the William T. Grant foundation and other interested readers with a broad and accessible overview of the youth social indicators field, including its dimensions, accomplishments, and major opportunities for development in the coming decade, with particular attention to those opportunities that seem to us to fit most closely with current Foundation goals. In order to properly orient the reader, we begin with a brief background piece on the nature and uses of social indicators. This is followed by descriptions of the current status of and key opportunities for the youth indicators field in the areas of research, data development, dissemination/data availability, and training and technical assistance. We finish by identifying what we feel are the greatest opportunities for the William T. Grant foundation given the core interests as summarized above.

Background

What is a Social Indicator?

Social indicators are quantitative measures of well-being that can be tracked over time and compared across social, economic, and other relevant social subgroups (Moore 1997). They differ from simple scientific descriptive measures in several respects.

- First, the meaning of an indicator is grounded both in the present, as a measure of current well-being, and in what it indicates for future well-being (Ben-Arieh et al. 2001). For example, adolescent depression is important both because of the current unhappiness it reflects and because of what it portends for future happiness and a successful transition to adulthood.

- Second, when used in a policy context (which, broadly construed, is most often the case), the meaning of social indicators, and the relative importance we assign

to them, are grounded both in science and in the values of the social actors who make use of them.

- Third, because they are predominantly tools to inform social action, social indicators must be easily understood by and meaningful to the non-scientific community including policymakers, service providers, citizens, and the youth themselves. So, for example, the National Education Goals Panel (now defunct) reports the percentage of youth who score high enough to be deemed "proficient" in math, rather than simply reporting the average score on a scale from 0-800 (National Assessment of Educational Progress 2001).

At a technical level, social indicators should be operationalized with well-designed, psychometrically strong and culturally appropriate measures, and fielded using high quality, representative survey and administrative data collection techniques (Moore, 1997).

What is a Good System of Youth Social Indicators?

A complete system of youth social indicators data would have the following properties:

- It would be well-rounded, including youth outcomes in every major domain of well-being. A number of similar frameworks have been used to identify the key domains. Recently a National Research Council committee tasked to study youth development programs completed a thorough review of the literature and adopted a framework with four broad categories: physical development, intellectual development, social development, and psychological and emotional development (National Research Council and Institute of Medicine 2002). Child Trends recently completed a compendium of youth development outcomes that divides the outcomes into four domains: physical health and safety; educational achievement and cognitive attainment; socioemotional development; and self-sufficiency (Hair, Moore, Hunter, and Kay 2001). The outcomes identified for each domain would be psychometrically

sound, and informed by scientific theory and current research as well as commonly held social values or practical wisdom.

- It would include elements of the social context affecting these many youth outcomes, including the family, peer, neighborhood, and institutional environment, with particular attention to those elements having the strongest overall influences on immediate and long-term well-being.

- Measures would be sensitive to developmental stage. The William T. Grant Foundation focuses on youth ages 8-25, which encompasses at least three developmental stages: middle childhood, adolescence, and the transition to adulthood. Each stage would have its own key set of indicators, and similar indicators across age groups will often be operationalized differently. This holds both for direct indicators of well-being and for indicators of social context. For example, whereas community violence levels would be in important contextual indicator for all ages, access to quality playground space would be relevant for young children only.

- It would identify the linkages among outcomes between one developmental period and the next period, which would include middle childhood, adolescence, and the transition to early adulthood.

- It would include a mix of positive developmental measures and negative or risk-oriented measures, both of which are important to assess healthy development.

- When used to guide policy, the system of indicators should include a mix of short, medium, and long-term indicators (Pratt et al, 1998). Short-term indicators are those that are most sensitive to short-term change. Policy and program staffs need short-term indicators to get quick feedback on recent program activities. The longer an indicator takes to change, the harder it is to plausibly link that change to particular policies. Short-term outcomes are often identified as interim goals linked to indicators that change more slowly, functioning as an early warning system. For example, an

education program to reduce teen smoking might track increased knowledge in the health consequences of tobacco use among their participants as a short-term indicator of success, if research had established that such knowledge leads to a reduced likelihood of smoking in the long-run. The need for a mix of short, medium, and long-term indicators holds true for all sorts of measures including direct outcomes, indicators of social context, and even indicators related to program operations.

How are Social Indicators Used?

Social indicators can and have been used for many different purposes, including purely scientific purposes. During the 1970s, for example, scientists focused on social indicators of child and youth well-being in order to better understand social processes, seeking to develop a comprehensive national system for tracking social change (Watts and Hernandez 1982). On a more mundane level, scientists often use observed correlation in change between two or more indicators as a source of hypothesis generation, which is then pursued using more rigorous methods.

Primarily, though, social indicators have been used as tools for policy and program-related purposes. With the revival of the field in the 1990s, even researchers began to focus more systematically on the needs and activities of the world of practice in guiding their work.[1] Practice-related applications include:[2]

- *Education, Monitoring and Needs Assessment*: Indicators are commonly used to educate the public, monitor well-being and assess social needs, often as a prelude to action. They can inform citizens, policymakers and program staff about developing problems and give them an accurate sense of their magnitude. A number of regular publications that serve this purpose at a general level include the Annie E. Casey Foundation's annual *Kids Count Databook*, the Federal Interagency Forum's *America's Children* report, and the National Center for

[1] Though, as researcher Clara Pratt argues, scientists still have a long way to go in this regard. (Child Trends, 2000).
[2] This section is based in part on a typology of social indicators use developed by Brown and Corbett (Brown and Corbett 2002).

Education Statistics' *Youth Indicators* report. Other data systems, such as the Center for Disease Control and Prevention's various health and disease surveillance systems, including the *Youth Risk Behavior Surveys*, have been developed to monitor and assess need for specific aspects of well-being.

- *Mobilizing Public Opinion*: Indicators are commonly used by advocates to mobilize public opinion to affect program and policy decisions. State *Kids Count* groups, most of whom are advocacy organizations, make regular use of indicator data for these purposes. The Children's Defense Fund, a national advocacy organization, publishes an annual report of child and youth indicator data, the most recent edition of which is titled *2001 Children in the States.*

- *Goals Tracking*: Social indicators are also commonly used to track progress towards concrete, measurable goals that have been adopted by entire communities, states, or the nation. These entities commonly begin with a benchmark measurement to establish the current level of the indicator (e.g., the percent of youth who get regular exercise), and proceed to adopt an attainable goal to be achieved over, for example, a five- or ten-year period. These are intended to focus participating government and civic organizations on a limited set of common goals. Participating groups often will adopt measurable goals of their own that are related to the larger goal, but which will reflect the fruits of their own activities (e.g., for a community-wide goal of improving the physical health of youth, a local school system may focus on increasing the percentage of public high school students who take physical education classes). At the national level, the *Healthy People 2010* initiative is a prime example of a goals-driven use of social indicators. Well-known examples of state-level goals-driven initiatives include Oregon Benchmarks, New York Touchstones, and Minnesota Milestones (see Brown and Corbett, 2002, for details). A variant on this approach is based on *continuous improvement*, where indicators are used to track progress over time, though no specific targets are set.

- *Results-based Accountability*: Funders are increasingly using social indicator data to hold individual agencies, programs, and initiatives accountable for improving outcomes for youth. Which measures are used and the levels of improvement that must be met are commonly, though not always, negotiated. Failure to demonstrate improvement may result in additional technical assistance to overcome problems, or to reduced funding and loss of autonomy. In the youth arena this use of indicators has been most developed in public education, though private foundations and local governments are also beginning to adopt this approach in the youth development field. For example, the D.C. Trust, which is responsible for funding over 40 child and youth programs throughout the Washington, D.C. area, is implementing an outcomes-based reporting system that will be used in part to hold the programs accountable for improving the well-being of the children and youth that they serve.[3]

- *Reflective Practice*: Communities and individual youth programs are using a social indicators approach to inform their own practice on an ongoing basis. Many develop formal logic models that relate particular program activities to expected outcomes for participating youth using an explicit theory of change (United Way of America 1998, Gambone 1998, Weiss 1995).[4] In the case of a whole community initiative, such a model would include inputs from multiple participating programs (public and private), as well as measurable outcomes for the community's youth. If program measures indicate that programs are being effectively implemented and the youth well-being indicators move in the expected direction, then the initiative is judged to be effective. If the youth indicators do not move in the expected direction, then the underlying assumptions of the logic model are called into question, and one or more aspects of the service approach is changed. Alternatively, it could point to deficiencies in the *implementation* of the program if the logic model is sound. The process is similar for individual youth

[3] Child Trends is providing technical assistance in setting up this system. For additional information on this project, contact Jacinta Bronte-Tinkew, Child Trends, at Jbronte@childtrends.org.

[4] This theory of change is based on science where it is available, as well as the beliefs and expectations of those who are participating in the initiative.

programs, though outcomes are generally limited to program participants rather than all area youth.

At a practical level, reflective practice functions like an internal program evaluation. It lacks the methodological rigor to produce scientific knowledge but is an increasingly popular management tool for youth initiatives (National Research Council and Institute of Medicine 2002).

- *Evaluation*: Generally speaking, social indicators make poor tools for formal, scientific evaluations of programs and policies.[5] Funders are tempted to use them for this purpose because they are much cheaper than experimental/control designs, but this should be resisted. A number of innovative researchers have been trying to develop a theory-based approach to evaluation for complex comprehensive community initiatives that relies heavily on the construction of logic models and makes extensive use of social indicator data (see Connell and Kubisch, 1998). The approach, however, is controversial and still in its early stages of development.[6]

Research on Youth Indicators

For many years, youth research and youth development activities relied on a few general models to guide their work. The first is a **deficits model**, focusing on the causes and consequences of negative youth behaviors (drug use, sexual promiscuity, delinquency, violence, academic failure). A related approach, the **resiliency framework**, also focused on these negative outcomes, but was more sensitive to the positive personal and contextual factors that help youth to resist negative influences and avoid the dysfunctional behaviors (Garmezy 1991; Rutter 1984). The result was a relative wealth of research on negative outcomes and the social indicator data needed to track their incidence over time.

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[5] Of course, the *measures* used in tracking indicators of child and youth well-being can and are used in experimental evaluation studies to assess program impacts.

[6] For a critique of this approach see Cook (2000).

If federal and private program dollars associated with the avoidance and amelioration of these negative outcomes were driving much of the research in this area, up from the world of community practice another message emerged that "problem free does not mean fully prepared" (Pittman and Irby 1996). Many youth program staff, parents, and youth themselves were saying that a focus on positive strengths and the social factors that promote them was a more effective and satisfying way to approach youth development than one focusing only on the avoidance of damaging outcomes. This gave rise to an alternative, **positive development model**. For the last several years, researchers and survey designers have been playing catch-up with the practice world, creating new conceptual frameworks that include positive constructs, and working on effective ways to measure them (Moore, Evans, Brooks-Gunn, and Roth forthcoming; Peterson and Seligman 2001; Moore and Glei 1995). One early manifestation was the development of the Search Institute's *Profiles of Student Life: Attitudes and Behaviors* survey (PSL-AB), which focuses on youth's personal and social assets. The PSL-AB has been fielded in hundreds of communities to fill the data void created by an overly strong focus on negative outcomes in our data collection systems.

The third model guiding youth research looked more generally at the **transition to adulthood**, focusing in particular on factors related to becoming an independent adult, such as academic achievement, employment, and marriage and fertility outcomes. This approach, which dominated most social stratification and poverty research for decades, was fruitful, but it virtually ignored other socially important adult outcomes including physical and emotional health, positive citizenship, civic involvement, spiritual development, and parenting skills. As these outcomes were ignored, so was research on the influences and outcomes in youth that determine a successful transition to these adult roles and statuses. Research to explore youth development in relation to these other adult outcomes is on the rise, though it is still modest owing in part to the current dearth of available longitudinal survey data to pursue such questions.

Another factor affecting youth research in the last decade was the growing racial and ethnic diversity of the youth population, which has forced researchers to focus on the fact that research on youth development, and the social indicators used to characterize and track that development, needs to be sensitive to group differences in the ways in which development is accomplished, and even in what is valued as positive development. Recent work by Zaslow and colleagues (1998), for example, demonstrates how the HOME scale, a composite measure of the quality of the home environment for children, needed questions added to make it equally applicable for low-income and non low-income families. Research by Lerner (1998) demonstrates that Latino youth report becoming closer to their parents as they enter adolescence, whereas white non-Latino youth report growing further apart, which may indicate that parent/youth relationships work differently across the two groups.

These developments are giving rise to a much broader framework for youth development research, one that focuses on both positive and negative outcomes as well as contextual influences; which looks at the transition from youth to adulthood using a lens that includes a broader set of young adult outcomes; and which takes seriously the notion that the dynamics of development and the proper operationalization of social constructs in surveys may need to be different for some population subgroups (National Research Council and Institute of Medicine 2002). For social indicators researchers, this means that there is a great deal of work to be done to develop strong measures of positive youth development and the research to back them up (Eccles, Templeton, and Brown 2001). It also means that even the indicators that we have long had at our disposal will need to be re-evaluated for their cultural robustness and applicability to major cultural and socioeconomic subgroups of youth.

The practice community has led the call for better research on positive indicators (Murphey 2001). The state of Vermont, for example, recently fielded the Search Institute's assets-based Profiles of Student Life: Attitudes and Behaviors (PSL-AB, see below) throughout the state in response to repeated requests from local community planning groups for more positive measures.

In addition, interviews with leaders in the practice field have revealed additional research needs for this group. Several, including Judith Erickson of the Indiana Youth Institute and David Murphey of the Vermont Agency for Human Services, say there is an unmet need among practitioners for a better sense of how all the indicators fit together – an understanding of what affects what and by how much. Where youth are concerned, what they want is a model of youth development that can tell them, for example, what the key personal and social factors leading to a reduction in teen births are, and what a reduction in teen birth will mean for other aspects of development down the road. This is particularly important when indicators are used to coordinate planning across multiple agencies. Research can also inform practitioners by identifying which outcomes are the most amenable to change through effective interventions, as well as the magnitude of the change that can reasonably be expected.

Murphey indicates that policymakers would like to take this a step further by developing simple forecasting techniques that would allow them to estimate the social and even the fiscal consequences of a 10 percent reduction in teen childbearing, or a 10 percent increase in mental health, or any of a number of key outcomes. Staff from several private foundations have also expressed a desire for such a capacity to help them with funding decisions. Such forecasting can be accomplished in a number of ways, including accounting models that rely on macro-level social indicator data and microsimulation models that use micro-level data.

Opportunities to Advance Research on Youth Development Indicators[7]

The William T. Grant Foundation is well situated to make a lasting and unique impact in this area in the coming years.

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[7] Recently Child Trends hosted a major national conference on child and youth indicators. Papers at the conference focused on accomplishments of the last decade in research, measurement and data development, and key opportunities for indicators development in the coming decade. Five of the papers discussed various aspects of youth-related social indicators, offering detailed recommendations in the areas of health, emotional development, social development, and peer and family influences. For those interested in a more detailed set of recommendations for indicators research in these areas, Child Trends will be happy to supply copies of the papers on request.

- *Encourage research on indicators of positive youth development and the contextual factors (including youth programs) that promote it.* We recommend that the Foundation consider funding a variety of research efforts on positive youth development including:
    - analyses of existing national and local longitudinal databases that contain positive outcome measures to identify the antecedents and long-term consequences of positive development;
    - psychometric studies of the reliability and validity of existing constructs and measures of positive youth development and, when needed, the development of new measures and indices of positive youth development suitable for large-scale surveys and self-administered youth surveys; and
    - methodological research, including qualitative and quantitative studies, that will allow for the development of indicators that link youth program activities to positive outcomes for youth.

- *Support longitudinal multi-variate analyses to identify the indicators of adolescent well-being (and contextual factors) that predict most strongly to a successful transition to adulthood.* The effects of family processes (particularly the role of fathers), peer relationships, and community factors on the transition to adulthood are not well understood. The importance of many elements of positive adolescent development (e.g., school engagement, character, self-efficacy, civic involvement, friendship skills, and creativity) in determining well-being in adulthood is also not well researched, owing in part to the lack of good longitudinal data. Also, as discussed above, research on the transition to adulthood has focused on a rather narrow range of adult outcomes and roles. Several contemporary data sets offer substantial opportunities for exploring some of these issues, including the National Longitudinal Survey of Adolescent Health (Add-Health); the National Longitudinal Survey of Youth 1997 Cohort (NLSY-97); the National Survey of Adolescent Males (NSAM); the National Longitudinal Survey of Youth-Child Supplement; and the Panel Study of Income Dynamics Child Development Supplement (PSID-CDS). Such work would allow

researchers to construct a stronger and more complete model of youth development, which would fill an important need of the practice community to better understand how the indicators related to youth development all fit together.

- *Promote the development of shorter indices of key indicators of youth development and social context.* Child and youth development research has developed many complex scales and indices to measure different dimensions of development and supporting contexts, measures that were originally developed for clinical settings and small sample studies. Unfortunately, such scales require too many questions for administration in large-scale surveys or administration in youth programs, particularly those cross-sectional surveys that we rely on for virtually all social indicators. Some work has been done to substantially shorten existing scales data (Moore, Halle, Vandivere and Mariner 2001), but this remains a rich vein for the development of new youth indicator measures.

- *Support research to develop forecasting models focused on youth well-being.* There is currently no capacity to forecast the overall social and fiscal impacts of changes in youth well-being, or the effect of other social trends (e.g., changes in family structure) on the well-being of our nation's youth. Such a tool would be enormously useful to policymakers and foundation staff. One might, for example, estimate the effects of lowering the teen pregnancy rate by 10 percentage points on graduation rates and suicide rates, as well as estimate the cost savings associated with those changes. A full-blown microsimulation model would be very beneficial to policymakers and funders, though complex and costly to develop. A less expensive option would be to develop cruder macro-level accounting models for many youth outcomes.

- *Conduct systematic research to identify cultural and other subgroup differences in the ways that youth development is defined and supported, and to identify indicators that are robust across subgroups.* Many of the indicators of youth well-being have not been well tested on minority and low-income populations. In

some cases, while constructs are valid across groups, the operationalization needs to be modified or broadened. Differences in cultural values may sometimes produce different indicators of positive development across groups (National Research Council and Institute of Medicine 2002). This need is especially urgent because many youth development programs and policies focus on particular minority and low-income groups, where the use of existing indicator measures may be sub-optimal or inappropriate.

Social Indicator Data Collection

In the last decade there have been tremendous advances in the amount of youth indicator data collected at all geographic levels from the international scene to the neighborhood.

International Indicator Data.[8] The U.S. is participating in five major international youth surveys in the areas of math and science, civics, and health. Education-related surveys include the Trends in International Mathematics and Science Study (TIMSS) (fielded in 1995, 1999, and 2003), the IEA Civics Study (1997-98)[9], the Program for International Student Assessment (PISA) (2000), and the Progress in International Reading Study (PIRLS) (2001). TIMSS collects data on youth in the 4th and 8th grades; the IEA Civics Study on 14-year-olds; PISA on 15-year-olds; and PIRLS on youth in the 4th grade. All collect detailed information including skill assessments, activities known to affect attainment (e.g. study and habits), as well as family context and detailed measures of the school environment. These surveys allow for systematic comparisons of U.S. student

[8] For a review of existing international surveys that can be used to generate comparable indicators, see Brown, Smith, and Harper 2001.

[9] The IEA Civics Study is a unique source of indicator data, collecting information on knowledge, beliefs, and activities in three areas: democracy and citizenship; national identity and international relations; and social cohesion and diversity.

achievement and social environments with dozens of developed and developing countries around the world.

The Health Behavior of School-Aged Children (HBSC) is a long-standing survey of 11-, 13-, and 15-year-olds focusing on health-related behaviors and their determinants. It has been fielded approximately every four years, and currently includes over 27 countries. The United States participated in the 1997-98 survey and is participating in the 2001-2002 survey. The HBSC, developed with the support of WHO-Europe, includes countries in Eastern and Western Europe as well as Canada, the U.S., and Israel. Data on a wide variety of positive and negative health behaviors and statuses are collected, as well as characteristics of the family, peer, and school environments. Another health survey, the Global Youth Tobacco Survey, has been collected in 40 countries, with another 38 countries in the process of fielding the survey (for details see Youth Tobacco Survey description below under *State and Local Indicator* data).

National Indicator Data. Despite some important gaps, the United States has perhaps the richest variety and depth of regularly collected youth indicator data of any country in the world. For example, *Youth Indicators*, an occasional publication of the National Center for Education Statistics, draws on dozens of sources for over 60 indicators. Available data sources that collect data on a recurring basis include general survey and administrative data such as the Vital Statistics system, the National Health Interview Survey (NHIS), the National Household Education Survey (NHES), the Current Population Survey (CPS), and the National Household Survey of Drug Abuse (NHSDA). In some cases, these sources provide indicator data stretching back several decades or more.

The roster of databases also includes major surveys focusing particularly on youth, primarily on education and health-related concerns. The National Assessment of Educational Progress (NAEP) has been tracking academic attainment with periodic assessments in math, science, reading, writing, history, civics, and the arts since 1969.

The NAEP focuses on youth in the 4th, 8th, and 12th grades.[10] Monitoring the Future (MTF), which has collected data on 12th grade youth on an annual basis since 1976, and on 8th and 10th grade youth since 1991, focuses on drug use but also asks questions on attitudes and values covering a wide variety of topics, as well as measures of religious, political, and volunteer activities; happiness, self-esteem, locus of control, risk behaviors, violence, and victimization.

State and Local Indicator Data.[11] Youth indicator data at the state and local level come from several major sources: administrative data systems; federally-sponsored surveys and assessments; and surveys and assessments particular to each state. Data collection has expanded substantially over the last decade, particularly in the areas of health and educational assessment, and continues to develop at a fast pace.

Administrative data sources commonly tapped for youth indicators at the state and local levels include birth and death data from vital statistics; youth crime data from police and court records (e.g., reports and arrests); health surveillance data (e.g., STDs and AIDS); school records of enrollment and graduation; and child welfare and public assistance data. (See Coulton and Hollister 1998 for details.)

In the education area, the National Assessment of Educational Progress (NAEP) was extended in 1990 on a voluntary basis to the state level in the areas of reading, writing, math and science. In 2001, 41 states participated. In addition, in recent years most states have adopted their own comprehensive systems of regular educational assessment for children and youth from the third grade and up (Archbald 1998). They are commonly used to hold schools and school systems accountable for improving the performance of students. Also, in a number of states, minimum scores are required by individual students to graduate. Assessment data are often made available to the public for

[10] The long-term trend sample, used to track trends beginning prior to 1990, monitors those ages 9, 13, and 17.

[11] For a thorough review of federal sources for child and youth indicator data at the state and local level, see Brown (2001).

individual schools via the Internet, or through the distribution of published "report cards."[12]

The Schools and Staffing Survey (SASS), fielded in 1988-89, 1993-94, 1999-2000, and every four years into the future, provides data on student and staff characteristics, patterns of staffing, graduation rates, and program and service characteristics at the state level for public and private schools.

In the area of health and safety, the Centers for Disease Control and Prevention has designed several surveys specifically to help states and large cities to track youth health risk behaviors. The Youth Risk Behavior Survey (YRBS) covers health statuses and behaviors in six areas: intentional and unintentional injury, tobacco use, sexual behavior, physical activity, alcohol and other drug use, and dietary behaviors. It is a school-based survey of students in grades 9-12 and is fielded every other year. The survey, which began in 1990, was fielded in 42 states and 16 major metropolitan areas in 1999. A handful of states have used their own financial resources to expand the survey sample so that indicators can be generated for individual school districts. The survey was designed by national experts in adolescent health in consultation with education agencies in the 50 states and the 16 participating metropolitan areas. A detailed rationale, thoroughly grounded in the health research literature, has been developed for each of the measures included in the survey.

More recently, the National Youth Tobacco Survey has been fielded to gather detailed information on youth behaviors and attitudes related to smoking and tobacco use. The survey was fielded in 27 states in 2000, up from three states in 1998. A national sample is also surveyed. Fresh data are collected every year or two, depending on the state. It is

[12] For a listing of state report cards available in various states, visit http://edreform.com/education_reform_resources/school_report_cards.htm

administered to youth in grades 6 through 12, focusing on seven topic areas: tobacco use; tobacco-related knowledge and attitudes; the role of the media and advertising in young people's tobacco use; access to tobacco; exposure to tobacco-related school curricula; exposure to secondary smoke; and cessation of use. Data are also collected internationally through the Global Youth Tobacco Survey. Forty countries have collected data, and another 38 are in the process of fielding the survey.

A third survey, the *Student Survey of Risk and Protective Factors, and Prevalence of Alcohol, Tobacco, and other Drug Use* (SSRP), focuses on risk and protective factors influencing drug use, violence, and other behavior problems for youth ages 12 to 18 (Pollard et al. 1999; Arthur et al. undated). While direct measures of youth outcomes are focused on these negative behaviors, measures related to family, peer, and school influences are more well-rounded with many positive measures, such as close and supportive parent-child relationships and perceptions of the availability of useful roles for youth in the community. Most of the indicators are based on multi-item scales with strong psychometric properties and strong grounding in the research literature. The survey, which was developed by the Social Development Research Group at the University of Washington,[13] is being field-tested in six states, and is intended for use by states, community, and youth programs. Data collection takes place in schools.

In addition to these efforts, the National Institute for Drug Abuse (NIDA) recently expanded the sample size of the National Household Survey of Drug Abuse (NHSDA) so that annual state-level estimates of drug abuse can be generated for youth ages 12-17 and 18-25. Though less detailed than the other surveys discussed above, the survey includes youth who are out of school, which the others do not.

The Search Institute, a private nonprofit organization, has developed a unique survey focusing on the personal and environmental *assets* of youth called *the Profiles of Student Life: Attitudes and Behaviors* (PSL-AB). The instrument covers four areas of youth

[13] This survey is being developed with federal funding from the Center for Substance Abuse Prevention within the Substance Abuse and Mental Health Services Administration (SAMHSA), U.S. Department of Health and Human Services.

outcomes (commitment to learning, positive values, social competencies, and positive identity) and four measures of family, community, and peer context (support, empowerment, boundaries and expectations, and constructive use of time). Negative behaviors are also covered, including drug use, violence, drunk driving, gambling, and eating disorders. Most of the questions in the survey have been culled from existing national surveys. The measures are grounded in the existing scientific literature, although, as the designers freely admit, the research base is thin in a number of domains such as empowerment, positive values, cultural competence, self-esteem, and sense of purpose (Leffert et al., 1998).

The PSL-AB has been fielded in communities throughout the states of Vermont and Colorado, and in hundreds of individual communities throughout the country. The survey's growing popularity, we believe, is in part a reflection of the strong desire at the community level to focus on building positive outcomes for youth rather than focusing solely on the prevention of problems. Many of the positive constructs covered in this survey are not well covered in the other surveys we have described.[14] Some of the indices that have been constructed by Search to represent the 40 assets are not as psychometrically strong as those in the SSRP, in part the result of a conscious trade-off in favor of measures that are more easily and intuitively understood by users (see National Research Council and Institutes of Medicine 2002, Chapter 8).

Finally, the American Community Survey will, beginning in 2003, provide annually updated estimates of population characteristics including virtually all of the measures now collected in the decennial census. The survey will produce independent annual estimates for states and large communities, and 5-year rolling averages down to the census tract level. While the survey does not focus on youth, it will provide a great deal of demographic and socioeconomic characteristics on youth and their families for small areas that were previously available only once every ten years. It will also be used to enhance the accuracy of local population estimates, which are used (as denominators) in

[14] For additional discussion of the PSL-AB and the SSRP Survey instruments, see National Research Council and Institutes of Medicine 2002, Chapter 8.

conjunction with local administrative data to produce rates for a wide variety of youth indicators (e.g., the teen birth rate).

GIS Community Databases. One of the revolutions in social indicator data collection is taking place at the community level, particularly in large metropolitan areas, in the form of Geographic Information Systems (GIS) capable of providing indicator data down to the neighborhood level. These are general indicator data systems that include quite a lot of data on children, youth, and their families. They allow local planners to draw on many data sources in order to identify areas of need and monitor progress across multiple dimensions for individual neighborhoods. Judith Erickson of the Indiana Youth Institute indicated that such data systems are crucial to youth program staff because their concern is usually with a small, well-defined catchment service area, and they require indicator data for that area. Such systems also allow planners to match needs and available resources for a local area. Examples of advanced systems of this sort include the Cleveland Area Network for Data and Organizing (CANDO) and the Social Assets and Vulnerability Indicators for Central Indiana project (SAVI).

The number of community GIS databases has grown substantially in the last few years. The number of members in the National Neighborhood Indicators Project, a consortium of groups that have or are developing GIS capability, has grown steadily. In addition, the Annie E. Casey Foundation is pursuing the development of such databases in several of its 21 community sites related to its Neighborhood and Family/Transformation and Development initiative (NT/FD). The need for and interest in such databases in the practice community is clear.

Among those who have already established community GIS databases, the major need appears to be the incorporation of additional data into the system. For example, several members of the NNIP project are being funded by the Department of Health and Human Services to add health data from Medicaid and other sources to their systems in order to make them more useful to health-related planning efforts.[15] The Center for Youth

[15] For details contact Thomas Kingsley, The Urban Institute, at tkingsle@ui.urban.org.

Development is attempting to do something similar in several communities for youth-related data through its "On the Plus Side" initiative.

Opportunities to Advance Youth Indicator Data Collection

- *Work with communities that have GIS data systems to expand the amount of data relevant to local youth development program staff.* The foundation should consider working with those communities that already have GIS systems in place to maximize them for use in youth development planning, as DHHS/ASPE is currently doing for local health planning. Such an effort would require some funding for data collection and to support meetings between the organizations that maintain the data systems and local youth program staff.

- *Promote survey-based youth indicator collection at the community level.* All communities have at least some access to administrative indicator data on youth. These sources are inadequate, however, to develop a well-rounded portrait of youth development and well-being, particularly where positive youth development is concerned. The need is clearly demonstrated in the success of the Search Institute's PSL-AB survey, which has been fielded in hundreds of communities across the country. Effective local planning around youth development requires the sorts of data that can only be gathered in a survey. The John S. and James L. Knight Foundation, through its *Community Indicators Project*, fielded their own survey in each of their 26 focus communities. The Annie E. Casey Foundation is also developing a survey for its NT/FD communities, which will gather information on children, youth, and their families that cannot be obtained through administrative data sources.[16] One opportunity for the Foundation lies in working with states to expand their YRBS sample sizes so that data can be generated for communities. This may be the most cost-efficient means there is to increase the local availability of such data in states where the YRBS is already being fielded. Several states, including Alaska, Montana,

[16] For details contact Thomas Kingsley, The Urban Institute, at tkingsle@ui.urban.org.

Nevada, Oregon, Utah, and Vermont, have done this one or more times in the past decade.

- *Coordinate measures between longitudinal and cross-sectional surveys of youth.* Much of the important research that takes place in the youth development field depends on longitudinal data sets. Here is where youth development measures can be thoroughly explored for their relationship to long-term developmental outcomes. They are the proving ground for youth indicator measures. Cross-sectional surveys, on the other hand, are the logical vehicles for actually tracking youth indicators over time. Such coordination could lead to a "system of continuous improvement" in our national system of child and youth indicator data (Stagner and Zweig 2001). Unfortunately, there is relatively little coordination between the operationalized measures used in longitudinal and cross-sectional surveys.[17] Federal statistical agencies need to take the lead in this area, but the Foundation can contribute significantly by supporting research using longitudinal databases to develop strong indicators of youth development that could be adopted for national cross-sectional surveys. A formal public-private partnership with the Federal Interagency Forum on Child and Family Statistics to develop and implement such measures may be a productive strategy.

- *Increase the number of indicators of positive development included in youth surveys*. Surveys like the YRBS and the Student Survey of Risk and Protective Factors are developed with great scientific care and produce a lot of valuable indicator data. They are, unfortunately, lacking in measures of positive outcomes. They could be made much more useful if states and communities were given the option of fielding more positive measures, at least on an occasional basis. The state of Vermont, for example, has added measures of positive development to its Youth Risk Behavior Survey.[18] The Foundation could work with Vermont and

[17] One exception is the Early Childhood Component of the National Household Education Survey, a cross-sectional survey that has adopted measures based on work from a longitudinal survey called the Early Childhood Longitudinal Study.

[18] David Murphy, Vermont Agency for Human Services, personal communication.

other interested states to develop high quality modules that could be added to the state YRBS surveys. The National Governor's Association, in fact, has organized the Boulder Youth Policy Network, a consortium of states interested in promoting youth development and improving their capacity to track positive development over time.[19]

- *Encourage the collection of indicator data on out-of-school youth.* The paucity of indicator data on out-of-school youth is largely a matter of economics, as it is far cheaper to collect survey data on youth who are in school. Most of the major youth surveys, including Monitoring the Future, the Youth Risk Behavior Survey, the National Assessment of Educational Progress, the Youth Tobacco Survey, and the PSL-AB, are limited to those youth who are attending school. There are ways to improve this situation, at least at the national level, by attaching special youth modules to household-based surveys. This was done in 1992, when the questions in the YRBS were fielded to youth in the National Health Interview Survey, and in 1996 and 1999 when a youth module was fielded in the National Household Education Survey. It should be done more systematically by Federal data collection agencies. These youth are, after all, more likely to be at-risk on many dimensions of well-being.

Dissemination of Youth Indicator Data.

Effective dissemination efforts are key to turning youth indicator data into effective supports for policies and practices intended to improve the well-being of America's youth. In the last decade there has been an explosion in the dissemination of youth indicator data. The reasons for this include more available data, better technology for dissemination (i.e., the Internet), more interested users, and more funding. These include issue-specific and cross-cutting reports, in hard copy and online.

[19] For additional information on this state consortium, contact Evelyn Ganzglass, National Governor's Association, Washington, D.C.

Internationally, many countries are producing regular reports on the condition of children and youth (see Bradshaw and Barnes 1999 for an overview). Within the U.S., Federal agencies have developed several cross-cutting compendia that include trend data on many domains of child and youth well-being. *Trends in the Well-being of America's Children and Youth*, updated annually and disseminated by the Office of the Assistant Secretary for Planning and Evaluation, DHHS, contains over 100 indicators and dozens specifically on youth outcomes. An annual report to the President, *America's Children: Key National Indicators of Well-being*, contains trend data on about 25 key indicators, over a third of which are specifically on youth outcomes, with many others showing separate estimates for youth. This is a widely distributed document. Finally, *Youth Indicators*, produced by the U.S. National Center for Education Statistics approximately every three years, contains trend data on over 60 youth indicators in the areas of family, education, work, health, behaviors and attitudes.

In addition to these compendia, there are a number of domain-specific and survey-specific national publications relevant for youth development that are disseminated by Federal agencies in hard copy and over the Internet. Most of the data sources described in the previous section have their own regular publication series. Finding these publications can be a challenge for the uninitiated, though recently the web site for the Federal Interagency Forum on Child and Family Statistics has begun to list such publications by topic area on their web site, with links to individual agency web sites. We list major sites in the Appendix of this paper.

Kids Count, sponsored by the Annie E. Casey Foundation since 1990, is the most widely known and far-reaching effort by a non-governmental organization to disseminate social indicators data on children and youth. The national *Kids Count* group produces an annual report featuring comparable indicators for each of the 50 states and the District of Columbia, and produces occasional reports on specific topics with data for both state and major metropolitan areas. In addition, *Kids Count* organizations within each state produce their own annual reports featuring social indicator data at the county level. Most

of the state project reports are produced and used by child advocacy organizations to further the cause of children and youth, though state agencies are the main sponsors in a few cases.

Facts-at-a-Glance, an annual publication by Child Trends, is one of the longest ongoing indicator series. Funded by the Charles A. Stewart Foundation and the William and Flora Hewlett Foundation, it provides national, state, and city-level data on teen childbearing to an audience of over 11,000 policy makers, program providers, researchers, funders and journalists.

State governments and state agencies have also become more active in the dissemination of social indicator data on child development and well-being. An increasing number of states have multi-agency projects devoted to the dissemination and active use of indicator data to inform planning and policy development at the state and community levels. The state of Vermont, for example, has developed a series called "Community Profiles," which provides essential trend data on the well-being of children, youth, and families in each community, drawing on a variety of administrative and survey data resources. The state of Minnesota puts out a *Children's Report Card* series that reports on 26 indicators of child and youth well-being for each county in the state. Massachusetts has developed the Massachusetts Community Health Information Profile (MassCHIP) system, which provides access to community-level data from over 24 data sets, including many measures on children, youth, and their families.

Many states also produce and disseminate education "report cards" on a regular basis, drawing on their own assessments and school administrative data. The reports are commonly used to support education accountability initiatives and are often widely disseminated to parents as well. Similar reports focused on youth health data are also produced on a regular basis by state health or education departments.

Journalists and correspondents are also increasingly using social indicators in their reporting, and they are doing so with considerable sophistication. While perhaps the

best-known example of media use of indicators is *USA Today*'s "Snapshots," other national papers regularly feature news stories driven by or informed by social indicators. For example, *The New York Times* and *The Washington Post* routinely cover major releases of federal data, and both papers have reporters trained in statistics who often create news by piecing together trend data from a variety of sources. (One example of such reporting is a front-page *New York Times* story on the decline in single parenthood among low-income African Americans). Stories reporting national, state, and city-level data appear frequently on the Associated Press wire. And regional and local media outlets are also using data more extensively in their reporting. For example, there was heavy local media coverage of a February 2001 report by Child Trends and KIDS COUNT on trends in birth data for every state and the 50 largest cities. The news and editorial coverage of these data led to legislative action in several states and cities.

Clearly child and youth indicator data are more available than ever before. However, to our knowledge very little has been done to assess the penetration of these products to intended audiences or the extent to which they meet the needs of those audiences, or to identify the most effective marketing techniques for these products. To be sure, there are a few examples of such assessments being done in the social indicators field. William O'Hare recently completed a market analysis of the Kids Count annual databook by examining the coverage it received in hundreds of newspapers around the country (O'Hare and Reynolds 2001). The Federal Interagency Forum on Child and Family Statistics monitors the media uptake on its flagship report *America's Children: Key National Indicators of Well-being*, and held focus groups to get feedback from the users on design issues (Wilson and Whitaker 1999). Child Trends, in preparation for the design of its online *Child Databank*, interviewed a number of top journalists in the field to assess the content and design features would best meet the needs of the media. In general, though, this is an area of opportunity for the field in the coming decade, to more effectively market child and youth indicators products.

Opportunities to Advance Youth Indicators Dissemination

The growth in the dissemination of youth indicator data to ever more diverse audiences is one of the truly impressive developments of the last decade in the youth development field. This growth has produced new opportunities to turn data products into more effective tools in the support of youth development.

- *Assess the effectiveness of high profile youth indicators dissemination products.* Organizations that disseminate youth indicator data often know how many copies of their product have been distributed or downloaded, but know little about whether and how they are actually used, and whether they meet the needs of target audiences. Such knowledge is vital in completing the link between data and action, a fact of which the William T. Grant Foundation is clearly aware, given its focus on the evaluation of communications activities. We recommend that the Foundation consider funding assessments of the effectiveness of high profile efforts to communicate youth indicator data to specific audiences including policymakers, service providers, parents, and the youth themselves. This may consist of pre-post surveys assessing knowledge and attitudes before and after a dissemination activity, experimental control studies, as well as focus groups. We also recommend that it make effectiveness assessment a part of strategically selected indicators dissemination efforts that it funds.

- *Encourage the creation of a generation of "youth indicators entrepreneurs" who can develop and market youth indicator data effectively.* There are a number of ways that the foundation can pursue this goal. One possibility is the development of a "learning community" of organizations that disseminate youth indicator data, holding meetings where they can exchange ideas, and where they can interact with those with strong backgrounds in marketing ideas and policies such as lobbyists, campaign consultants, public relations professionals, and pollsters. The Annie E. Casey Foundation has started to do this with its state Kids Count groups by hiring the company Frameworks to work with the grantees.[20] A second possibility would be to support and train communications staff who are already

[20] For details contact Donald Crary (DonC@aecf.org), The Annie E. Casey Foundation.

good writers and marketers so that they can work with those in the youth indicators field to produce products that are more accessible to popular audiences.

- *Increase organized and easy access to existing state and local youth indicator reports*. At the moment, there is no organized access to what are probably hundreds of relevant reports containing youth indicator data at the state and local levels. For the most part they sit on individual agency web sites, often unknown even to staff from other agencies in the same state. This produces a lot of reinventing the wheel by groups in other states seeking to develop similar publications, and limits access to end users as well. Fortunately, this is a barrier to access that can be easily overcome with the development of a web porthole providing organized access to child and youth-focused indicators publications produced in each state.

- *Increase ease of access to all of the most up-to-date data on youth*. Many of the audiences that use youth indicator data need to have ready access to the most recent estimates in order to do their job. This is particularly the case with journalists and policymakers. While compendia like *Trends in the Well-being of America's Children and Youth* are very valuable to these users because they present key indicator data from dozens of sources in a consistent and accessible format, they become quickly out-of-date as new estimates from particular data sources are produced following (and sometime even before) publication. Users who need the latest estimates must still consult reports from individual agencies to make sure that they are in possession of the most recent data.[21] To solve this problem for national data. Child Trends has developed the *Child Trends Databank*, a web site that will be continuously updated to present the most recent available data on over 150 indicators of child and youth well-being; a true one-stop-shop for child and youth indicator data. We believe that the *Databank*, when

[21] The Forum does list links (www.childstats.gov) to individual agency reports as they become available with more recent estimates of indicators in the *America's Children* report, but they update the report itself only annually.

it goes online at the end of June 2002, will represent a giant step in the effective dissemination of indicator data in the service of children and youth.[22]

- *Support research to determine what outcomes youth themselves identify as key dimensions of their own well-being and the social supports that are most important to them.* The William T. Grant Foundation explicitly focuses on determining what adults think about youth, presumably so that it can more effectively communicate to them the needs of youth. We believe that youth are also a pivotal audience for social indicator data about themselves and their social environment. Identifying measures that reflect and connect with the ways that youth think about their own lives, and developing dissemination strategies that bring insights back to this audience, is a worthwhile and under-developed area in the youth indicators field. This is particularly important for youth development programs, where the cooperation and buy-in of participating youth are important to the success of the program.

Practice

The last decade has seen an explosion in the use of youth indicator data at all levels of geography from the international arena to the community and the local youth program. As described above, indicators are being used for a variety of purposes ranging from simple needs assessment to tracking progress on social goals, policy and program accountability, and to inform reflective practice. They are used by a wide variety of groups including government agencies, private service organizations, the media, child advocacy groups, and local youth programs. Some of the factors responsible for this increase include advances in computerization of data and access to computer technology, the devolution of responsibility for program design and execution to the state and local levels (where responsibility for outcomes replaces responsibility for proper execution of pre-defined programs), and a greater emphasis on overcoming the negative effects of "stove-piping" through greater coordination across agencies and programs serving youth

[22] The Databank will include 70 indicators in its initial release, and will add 20-30 new indicators each year over the next two years.

(Brown and Corbett 2002). It is a movement that we believe is likely to continue into the foreseeable future.

As the opportunities and pressures to use youth indicator data have increased within the practice community, so has the need for training and technical assistance in the proper collection and effective use of indicators. The lack of ready access to such technical assistance and training has led to a lot of wasteful reinventing the wheel, and we believe, has stifled many nascent efforts to use social indicator data to further youth development activities. Judith Erickson, who has worked with youth programs in Indiana for several decades, points out that most of the people who go into these professions are not well trained in basic statistics, and require some handholding to feel comfortable using social indicator data. Further, there is a lot of turnover at the program level that requires continual reinvestment in staff training in this area, as well as ready access to resource materials.

The Kids Count initiative began over 10 years ago by pairing an advocacy group and a research-based organization in most states in order to produce and disseminate annual state-level fact books on child well-being. Eventually, many of the child advocacy groups took over responsibility for the entire project once staff had become more comfortable with collecting and interpreting indicator data. The Annie E. Casey Foundation also provided technical assistance and training on data-related matters to these groups through such organizations as Child Trends, the Population Reference Bureau, and by encouraging peer assistance across state groups. After over a decade, most state Kids Count staff are fairly sophisticated in their handling of indicator data.

The New York Council on Children and Families (CCF), a state agency within the governor's office, has been working with county-level agency and nonprofit program staff to integrate local service delivery to children, youth and families, using social indicators as a major tool to support that effort. In this process, CCF realized that there was a great need for training on basic statistical and data quality issues, and for effective techniques in the use of social indicators for planning and management. In late 2001, they

teamed up with colleagues from Cornell University to develop a detailed curriculum and supporting materials for 1 and 2-day training seminars. The seminars adopt an innovative case study approach that reviews scenarios and simulates group planning efforts. Initial response has been very positive, with many participants commenting that they were happy to have "all the pieces" presented together in an integrated fashion.[23] Interest has been expressed by participants in taking more advanced seminars if they are offered.

A number of national intermediary organizations have developed to help provide support and source materials related to the use of social indicator data. The National Outcome Work Groups (NOWG) and the Aspen Roundtable on Comprehensive Community Initiatives, for example, offer valuable information on available measures and instruments needed to track child, youth and family outcomes. Other intermediary organizations provide comprehensive practice-related information specifically for youth development programs including data and measurement information, process and program evaluation, identification of best practices, and more. The National Youth Development Information Center (NYDIC) does this on a national level through its web site while the Indiana Youth Institute (IYI) focuses on programs in Indiana and offers hands-on technical assistance (including a staff of assessment team and 12 program evaluation experts) in addition to online information.

In addition to the need for high quality training and technical assistance, there is a general need on the part of users to link indicators with practices shown by science to be effective in improving those particular outcomes for youth. This is a concern for journalists and advocates as much as for policymakers and program staff. It is also a demonstrated concern to the staff of private foundations. Child Trends has been working with the Edna McConnell Clark and the John S. and James L. Knight Foundations to produce comprehensive reviews of youth development research and measures for use by the foundations and their grantees. Products include detailed but accessible literature reviews on all major aspects of youth development, "what works" tables that identify and describe the most effective programs for improving particular aspects of youth well-being, and a

[23] Personal communication, Mary DeMasi, CCF, at Mary_DeMasi@ccf.state.ny.us.

compendium of measures that can be used by programs to track progress in their own communities and individual programs. The Foundations are using these products to educate their own staff so that they can work effectively with grantees in developing their own capacities to use youth indicator data for program development, planning, and internal monitoring and assessment. They also make these products available to the public as part of their field-building activities.

Opportunities to Advance the Use of Youth Indicators in Practice

- *Develop general purpose instruction and training materials for users covering technical statistical and data issues, and strategies for their proper use.* When the CCF in New York went to develop its own curriculum and training materials on social indicators, there was surprisingly little high quality material of this sort to draw from. Off-the-shelf materials developed for specific audiences such as local service agency staff, youth program staff, journalists, and so on, would facilitate training and the adoption of social indicators as useful planning tools at all levels.

- *Increase the involvement of top-flight social scientists in the production of practical tools for practitioners in the field.* Youth researchers have an important role to play in developing the tools and the training that practitioners need to use youth indicators effectively in their daily work. It requires an in-depth understanding of research and measurement issues, combined with a thorough grasp of the challenges of designing and executing youth programs of all sorts (including education, employment training, youth development, moral/spiritual development, and so on). This is, unfortunately, a rare combination, as academia does not tend to generously reward scholars who are engaged in such practical activities. The William T. Grant Foundation is currently supporting several such efforts, however, including the work of the National Research Council's *Committee on Community-Level Programs for Youth*, and the work of James Connell and Michelle Gambone "Youth Development in Community Settings: Evidence, Measures, and Exemplary Practices." We recommend that the Foundation consider increasing the number of projects of this sort that it supports,

particularly those with a focus on youth indicators. The W.T. Grant Faculty Scholar program is another opportunity to support researchers in this kind of work. It may also have the effect of raising the cachet of such work in the academic community.

- *Support the work of national intermediary groups*. The work of the national intermediary groups identified above (NYDIC, NOWG, the Aspen Roundtable, IYI) is potentially very valuable for policymakers and practitioners who focus on youth. They make the fruits of basic research accessible to those who can put them to practical use. They take knowledge that is generated in the field and make it available to everyone so that the wheel does not need to be continually reinvented. Finally, they bring practitioners together so that they can learn from each other's experiences, and so that researchers can learn from them. Their work needs to be supported, expanded, and more effectively marketed.

- *Promote the development of resources and dissemination materials that combine youth indicators with science-based information on policies, programs, and family practices that positively affect those outcomes*. As mentioned above, Child Trends is working on one approach by developing an online "what works" table that identifies science-based knowledge of programs and program activities that are known to affect positive youth development. For example, sustained relationships with caring adults are a critical need of children and youth, and mentoring programs that meet this need have been found in experimental evaluations to have positive impacts on adolescent outcomes (Jekielek, Moore, and Hair 2001).

Summary Recommendation for the William T. Grant Foundation

Social indicators can be powerful tools for those who, like the Foundation, want to "enable youth to reach their full potential." They are used by youth service and program staff inside and outside of government at all levels from the U.N. to the local

neighborhood. They are grounded in both scientific research and in social values. They can be used to shape public opinion and are shaped by it. We believe that indicators deserve to be a major focus of the Foundation, and that there are handsome opportunities for the Foundation to advance the field in the areas of research, data development, dissemination, and practical application.

In this paper we have identified what we feel are a number of significant opportunities for the field in general in these four areas. While we encourage Foundation staff to consider all of the opportunities described in this paper as potential areas for investment, we offer these nine recommendations, in no particular order, as holding the most promise given its current interests and goals:

Research

- *Encourage research on constructs and measures of positive youth development and the contextual factors (including youth programs) that promote it, including studies of validity and reliability.*
- *Support longitudinal analyses to identify the indicators of adolescent well-being (and contextual factors) that predict most strongly to a successful transition to adulthood.*

Data Collection

- *Work with communities that have GIS data systems to expand the amount of data relevant to local youth development program staff.*

Dissemination

- *Encourage the creation of a generation of "youth indicators entrepreneurs" who can develop and market youth indicator data effectively.*
- *Develop and use effectiveness assessments for high profile youth indicators dissemination products.*
- *Increase ease of access to all of the most up-to-date data on youth.*

Practical Application

- *Support the involvement of top-flight social scientists in the production of practical tools for practitioners in the field.*
- *Promote the development of resources and dissemination materials that combine youth indicators with science-based information on policies, programs, and family practices that positively affect those outcomes.*

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Appendix
Web site addresses for Surveys, Publications, and Programs Mentioned in the Paper

American Community Survey
http://factfinder.census.gov/home/en/acsdata.html

America's Children: Key National Indicators of Well-Being
http://childstats.gov/

Aspen Roundtable on Comprehensive Community Initiatives
http://www.aspenroundtable.org

Center for Youth Development and Policy Research/Academy for Educational Development
http://www.aed.org/us/cyd/

Children's Defense Fund *2001 Children in the States* report
http://www.childrensdefense.org/statesdata.htm

Cleveland Area Network for Data and Organizing (CANDO)
http://povertycenter.cwru.edu/cando.htm

Community Indicators Project, John S. and James L. Knight Foundation
http://www.knightfdn.org/default.asp?story=indicators/indicators.html

Condition of Education
http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2002025

Current Population Survey (CPS)
http://www.bls.census.gov/cps/

Digest of Education Statistics
http://nces.ed.gov/pubs2001/digest/

Education Goals 2000 Initiative
http://www.ed.gov/G2K/

Education Report Cards (links to various states)
http://edreform.com/education_reform_resources/school_report_cards.htm

Federal Interagency Forum on Child and Family Statistics (the Forum)
http://www.childstats.gov/

Global Youth Tobacco Survey
http://www.cdc.gov/tobacco/research_data/youth/gytsfactsheets.pdf

Health Behavior of School-Aged Children (HBSC)
http://www.ruhbc.ed.ac.uk/hbsc/

Health, United States
http://www.cdc.gov/nchs/products/pubs/pubd/hus/hus.htm

Healthy People 2010
http://www.health.gov/healthypeople/

IEA Civics Study
http://www2.rz.hu-berlin.de/empir_bf/iea_e.html

Indiana Youth Institute
http://www.iyi.org

Kids Count
National: http://www.aecf.org/kidscount/
States: http://kidscountnetwork.org

Massachusetts Community Health Information Profile (MassCHIP)
http://masschip.state.ma.us/

Minnesota Children's Report Card
http://www.mnplan.state.mn.us/datanetweb/chi.html

Minnesota Milestones
http://www.mnplan.state.mn.us/SDI/progressind.html

http://www.mnplan.state.mn.us/mm/

Monitoring the Future (MTF)
http://www.monitoringthefuture.org/

National Assessment of Educational Progress (NAEP)
http://nces.ed.gov/nationsreportcard/

National Education Goals Report
http://www.negp.gov/

National Education Longitudinal Survey 1988 (NELS88)
http://nces.ed.gov/surveys/nels88/

National Health and Nutrition Examination Survey (NHANES)
http://www.cdc.gov/nchs/nhanes.htm

National Health Interview Survey (NHIS)
http://www.cdc.gov/nchs/nhis.htm

National Household Education Survey (NHES)
http://nces.ed.gov/nhes/

National Household Survey of Drug Abuse (NHSDA)
http://www.samhsa.gov/oas/nhsda.htm

National Immunization Survey (NIS)
http://www.cdc.gov/nis/

National Longitudinal Survey of Adolescent Health (Add-Health)
http://www.cpc.unc.edu/addhealth/

National Longitudinal Survey of Youth – Child Sample
http://www.bls.gov/nls/nlsmothr.htm

National Longitudinal Survey of Youth 1997 Cohort (NLSY-97)
http://www.bls.gov/nls/

National Outcome Work Groups
http://www.ag.arizona.edu/fcr/fs/nowg/

National Neighborhood Indicators Project (NNIP)
http://www.urban.org/nnip/

National Survey of Adolescent Males (NSAM)
http://www.nichd.nih.gov/about/cpr/dbs/res_national3.htm#socio

National Youth Development Information Center (NYDIC)
http://www.nydic.org

National Youth Tobacco Survey (NYTS)
http://www.cdc.gov/tobacco/nyts2000.htm

Neighborhood and Family/Transformation and Development Initiative (Annie E. Casey Foundation).
http://www.aecf.org/initiatives/ntfd/index.htm

New York Touchstones
http://www.capital.net/com/council/touchstones.html
http://capital.net/com/council/

On the Plus Side
(see Center for Youth Development, above)

Oregon Benchmarks
http://www.econ.state.or.us/opb/

Panel Study of Income Dynamics
http://www.isr.umich.edu/src/psid/

Profiles of Student Life: Attitudes and Behaviors Survey
http://www.search-institute.org/surveys/

Progress in International Reading Study (PIRLS)
http://www.timss.org/pirls2001.html

Schools and Staffing Survey (SASS)
http://nces.ed.gov/surveys/sass/index.asp

Search Institute
http://www.search-institute.org

Social Assets and Vulnerability Indicators for Central Indiana
http://www.savi.org/

Student Survey of Risk and Protective Factors and Prevalence of Alcohol, Tobacco, and other Drug Use (SSRP)
http://depts.washington.edu/sdrg/NIDA/

Trends in Mathematics and Science Study (TIMSS)
http://www.timss.org/

Trends in the Well-being of America's Children and Youth
http://aspe.hhs.gov/hsp/01trends/

Vermont "Community Profiles"
http://www.ahs.state.vt.us/01compro/01CPexpl.htm

"What Works" Tables
http://www.childtrends.org/schoolreadiness.asp

Vital Statistics
http://www.cdc.gov/nchs/nvss.htm

Youth Indicators
http://nces.ed.gov/pubs/yi/

Youth Risk Behavior Survey (YRBS)
http://www.cdc.gov/nccdphp/dash/yrbs/index.htm

U.S. Department of Education
Office of Educational Research and Improvement (OERI)
National Library of Education (NLE)
Educational Resources Information Center (ERIC)

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